

NORTHWOODS JOURNAL – JUNE 2020

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

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Why Care About Birds?

<https://www.3billionbirds.org/why-birds-matter>

Helping birds helps us all... and birds need your help! The loss of almost 3 billion breeding birds since 1970 is a problem for humans as well - here are five real-life examples of how birds make our lives better.



BIRD HABITAT SUPPORTS CLEAN WATER

Protecting waterways and their surrounding watersheds protects bird habitat and clean water. More than 60% of drinking water comes from rivers and streams. For example, research shows that protecting forested land in upstate New York watersheds is the most cost-effective way to provide clean water in New York City.



BIRDS AND THEIR HABITAT SUPPORT YOUR HEALTH

Experiencing nature can improve physical health and decrease stress, with benefits for recovery after surgery, test-taking performance, and workplace satisfaction. In fact, listening to bird songs and calls can help improve a person's mood and attention.



BIRDS BENEFIT YOUR BEVERAGES

Insect-eating birds protect farm crops, including the key ingredients in coffee and wine! A single bird can save up to 24 pounds of coffee beans per acre each year from pest damage. On vineyards, birds respond quickly to pest outbreaks by eating insect larvae and protecting grapes.



BIRDS ARE GOOD FOR THE ECONOMY

Birdwatching generates almost \$100 billion in economic impacts, and more than 45 million people in the U.S. watch birds. Certain bird species can make a big impact on local economies. For example, Northern Pintails generate \$100 million annually from bird watchers and hunters spending on hotels, sporting goods stores, gas stations, and other local businesses.



BIRD HABITAT BOOSTS PROPERTY VALUES

Parks and wildlife refuges can be good for birds and property values. One study showed that the presence of birds and green space can increase property values by up to \$32,000!



For more about how you can help birds in 2020, see page 2!



7 Simple Actions to Help Birds

<https://www.3billionbirds.org/7-simple-actions>



Make Windows Safer, Day and Night

The challenge: Up to 1 billion birds are estimated to die each year after hitting windows in the United States and Canada.

The cause: By day, birds perceive reflections in glass as habitat they can fly into. By night, migratory birds drawn in by city lights are at high risk of colliding with buildings.

These simple steps save birds: On the outside of the window, install screens or break up reflections—using film, paint, or Acopian BirdSavers or other string spaced no more than two inches high or two inches wide.



Take it further: Work with businesses or public buildings to offer a contest for creative “window mural” designs that make windows safer for birds. Support legislation for bird-friendly building designs. Start a lights-out campaign in your city.

Keep Cats Indoors

The challenge: Cats are estimated to kill more than 2.6 billion birds annually in the U.S. and Canada. This is the #1 human-caused reason for the loss of birds, aside from habitat loss.

The cause: Cats can make great pets, but more than 110 million feral and pet cats now roam in the United States and Canada. These non-native predators instinctively hunt and kill birds even when well fed.

Solutions that are good for cats and birds: Save birds and keep cats healthy by keeping cats indoors or creating an outdoor “catio.” You can also train your cat to walk on a leash.

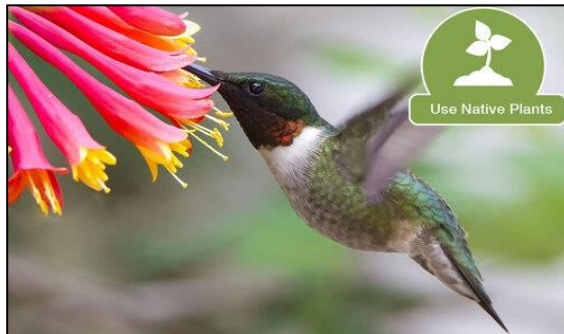


Reduce Lawn – Plant Natives!

The challenge: Birds have fewer places to safely rest during migration and to raise their young: More than 10 million acres of land in the United States were converted to developed land from 1982 to 1997. The cause: Lawns and pavement don't offer enough food or shelter for many

birds and other wildlife. With more than 40 million acres of lawn in the U.S. alone (source), there's huge potential to support wildlife by replacing lawns with native plantings.

Take it further: Add native plants and watch birds come in. Native plants add interest and beauty to your yard and neighborhood, and provide shelter and nesting areas for birds. The nectar, seeds, berries, and insects will sustain birds and diverse wildlife.



Avoid Pesticides

The challenge: More than 1 billion pounds of pesticides are applied in the United States each year. The continent's most widely used insecticides, called neonicotinoids or “neonics,” are lethal to birds and to the insects that birds consume. Common weed killers used around homes, such as 2, 4-D and glyphosate (used in Roundup), can be toxic to wildlife, and glyphosate has been declared a probable human carcinogen.

The cause: Pesticides that are toxic to birds can harm them directly through contact, or if they eat contaminated seeds or prey. Pesticides can also harm birds indirectly by reducing the number of insects that birds need to survive.

A healthy choice for you, your family, and birds: Consider purchasing organic food. Nearly 70% of produce sold in the U.S. contains pesticides. Reduce pesticides around your home and garden.



Drink Coffee that's Good for the Birds

The challenge: Three-quarters of the world's coffee farms grow their plants in the sun, destroying forests that birds and other wildlife need for food and shelter. Sun-grown coffee also often requires using environmentally harmful pesticides and fertilizers. On the other hand, shade-grown coffee preserves a forest canopy that helps migratory birds survive the winter.

The cause: Too few consumers are aware of the problems of sun coffee. Those who are aware may be reluctant to pay more for environmentally sustainable coffee.

Insist on shade-grown coffee that's good for birds: It's a win-win-win: it's delicious, economically beneficial to coffee farmers, and helps more than 42 species of North American migratory songbirds that winter in coffee plantations, including orioles, warblers, and thrushes.

Take it further: Look for *Bird Friendly* coffee, a certification from the Smithsonian Migratory Bird Center that also includes organic standards. Educate coffee shops and grocery stores about

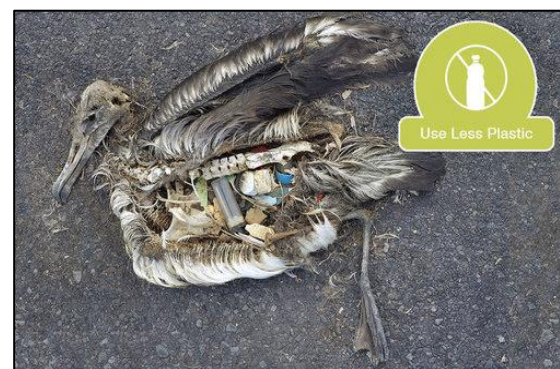
shade-grown coffee.



Protect our Planet from Plastics

The challenge: It's estimated that 4,900 million metric tons of plastic have accumulated in landfills and in our environment worldwide, polluting our oceans and harming wildlife such as seabirds, whales, and turtles that mistakenly eat plastic, or become entangled in it.

The cause: Plastic takes more than 400 years to degrade, and 91% of plastics created are not recycled. Studies show that at least 80 seabird species ingest plastic, mistaking it for food. Cigarette lighters, toothbrushes, and other trash have been found in the stomachs of dead albatrosses (below).



Reduce your use of plastics: Avoid single-use plastics including bags, bottles, wraps, and disposable utensils. It's far better to choose reusable items, but if you do have disposable plastic, be sure to recycle it. Advocate for bans of plastic bags, styrofoam, and straws. Encourage stores to offer incentives for reusable bags, and ask restaurants and other businesses to phase out single-use plastics.

Watch Birds & Share what you See

The challenge: The world's most abundant bird, the Passenger Pigeon, went extinct, and people didn't realize how quickly it was vanishing until it was too late. Monitoring birds is essential to help protect them, but tracking the health of the world's 10,000 bird species is an immense challenge.

The cause: To understand how birds are faring, scientists need hundreds of thousands of people to report what they're seeing in backyards, neighborhoods, and wild places around the world. Without this information, scientists will not have enough timely data to show where and when birds are declining around the world.

Enjoy birds while helping science and conservation: Join a project such as **e-Bird**, **Project FeederWatch**, a **Christmas Bird Count**, or a **Breeding Bird Survey** to record your bird observations. Your contributions will provide valuable information to show where birds are thriving, and where they need our help.

Mobilize others in your community by organizing school groups or leading bird walks and submitting your counts to e-Bird. Support organizations that coordinate monitoring projects, like the Audubon Society, Cornell Lab for Ornithology, or the North American Bird Conservation Initiative (NABCI).





National Pollinator Week is a time to celebrate pollinators and spread the word about how to protect them. 13 years ago, the U.S. Senate's unanimous approval and designation of a week in June as "National Pollinator Week" marked a necessary step toward addressing the urgent issue of declining pollinator populations. Pollinator Week has now grown into an international celebration of the valuable ecosystem services provided by bees, birds, butterflies, bats and beetles.

Without the actions of pollinators, agricultural economies, our food supply, and surrounding landscapes would collapse. Birds, bats, bees, butterflies, beetles, and other small mammals that pollinate plants are responsible for bringing us one out of every three bites of food. They also sustain our ecosystems and produce our natural resources by helping plants reproduce.



Pollinators travel from plant to plant carrying pollen on their bodies in a vital interaction that allows the transfer of genetic material critical to the reproductive system of most flowering plants – the very plants that...

- bring us countless fruits, vegetables, and nuts, and 1/2 of the world's oils, fibers and raw materials
- prevent soil erosion
- increase carbon sequestration

This nearly invisible ecosystem service is a precious resource that requires attention and support - and in disturbing evidence found around the globe, is increasingly in jeopardy. Pollinator Partnership urges you know how this system supports you, and how your actions can help support healthy and sustainable pollination.

- ✓ About 75% of all flowering plant species need the help of pollinators to move their heavy pollen grains from plant to plant for fertilization.
- ✓ About 1,000 of all pollinators are vertebrates such as birds, bats, and small mammals.
- ✓ Most pollinators (about 200,000 species) are beneficial insects such as flies, beetles, wasps, ants, butterflies, moths, and bees.

For more information visit:

- <https://www.pollinator.org/pollinator-week>
- <https://www.fws.gov/pollinators/>
- <https://www.nwf.org/Pollinators>



How Bees Pollinate

<https://www.beesponsible.com/>

Pollination is how plants reproduce. About 90% of the world's flowering plants depend on pollination by animals, mostly insects. Bees in particular have special adaptations and behaviors that make them very important pollinators. But did you know bees don't pollinate our plants on purpose? It actually occurs as a result when they visit flowers to gather food for themselves and their young.

Pollen

A bee collects nectar and pollen from a flower blossom. Some pollen from the stamen (the flower's male reproduction organ) sticks to the bee's hair.

Pistil

When the bee visits its next flower, some of this pollen rubs off onto the pistil (the flower's female reproductive organ).

Fertilization

That simple transfer of pollen fertilizes the flower, which eventually leads to new fruits, vegetables, garden flowers, legumes, nuts and other plants.



How Bees Impact our Food Supply

Bees are responsible for pollinating nearly 1/3 of our food, including about 900 food crops worldwide. Their pollination of 60–70% of the world's flowering plant species also contributes to production of fruits and seeds that other animal species depend on.

Bees make it possible for us to enjoy countless fruits, vegetables and nuts. Here are just a few of the healthy foods we wouldn't have without their pollination services: apples, almonds, asparagus, broccoli, blueberries, cashews, cauliflower, cranberries, cucumbers, cantaloupes, cherries, grapes, kiwis, mangoes, nectarines, peaches, pears, plums, pumpkins, raspberries, strawberries, tomatoes and watermelons.



Bees contribute to higher crop yields, as well as size and quality of fruits produced. Research conducted on berry farms has shown that pollination from native bees could boost production up to 36% on one farm alone. Other crops that are typically wind-pollinated or self-pollinated are sometimes more productive when visited by bees.



Here's how you can help native bee species, honeybees, & other pollinators!

- ✦ Install a variety of native plant species for your region & avoid invasive species – visit <https://www.pollinator.org/guides> for more info
- ✦ Don't use pesticides, herbicides or other chemicals in gardens and yards
- ✦ Provide nesting and water sites – bare ground, plant stems, old logs, & water dish or bird bath
- ✦ Leave the weeds! Let dandelions, clovers & other 'weeds' to bloom for bee/pollinator food
- ✦ Educate others about the importance of pollinators/bees and their benefits to humans
- ✦ Support local & national legislation to protect pollinators and habitat
- ✦ Try to live 'greener' and lessen your carbon footprint a little each day

Need native plant or pollinator information for your yard projects?



Need guidance with upcoming landscape projects involving native plants, pollinator or butterfly gardening, improving wildlife habitat, or similar topics? Come visit the Marinette County Land & Water Conservation Division and UW-Extension, both located at the Land Information Office on the first floor of the Marinette County Courthouse. There are many available flyers, brochures, guides, and other materials available to help with your project.

Staff from LWCD & UWEX can answer questions you may have or help with suggestions. Visit the LWCD, UWEX, & NLMGA on Facebook, or call 715-732-7784 (LWCD) or 715-732-7510 (UWEX) for more information.

Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for "Northwoods Journal". We can also send you an e-mail reminder when each new issue is posted online. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email abartels@marinettecounty.com.



Fox River Trustee Council Works with State and Local Partners to Improve Peshtigo River Fish Habitat

By Chuck Druckrey - Water Resource Specialist, Land & Water Conservation Division

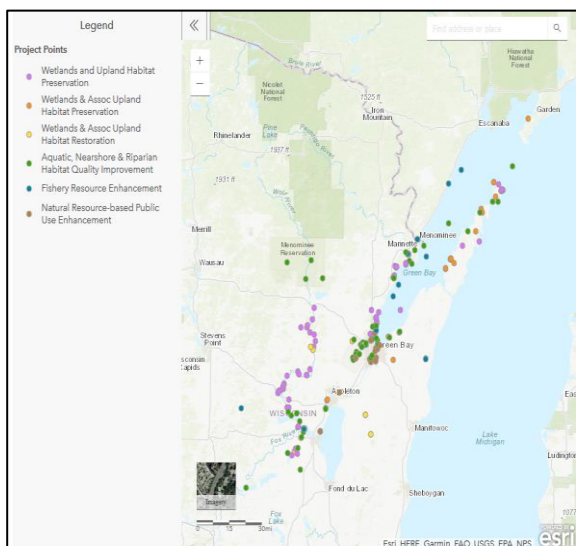


When a landowner on the Peshtigo River called the Marinette County Land & Water Conservation Division for help with a shoreline erosion problem, he was hoping that I could offer some advice on how to stop the erosion that was claiming larger chunks of his riverfront property without costing an arm and a leg. I was familiar with the site from frequent canoe trips down the river. It was more than 400 feet long with a 20-foot high sand bank. Over the years I had watched as large sections of the bank collapsed into the river, claiming trees and shrubs with it. I explained to the landowner that I could engineer a solution, but this type of project is technically difficult, and never cheap.

Fortunately, a few months after my initial discussion with the landowner I was introduced to the **Fox River Trustee Council** and the work they do to improve natural resources in the waters of Green Bay. The Natural Resource Trustees consist of the Wisconsin DNR, Oneida Nation of Wisconsin, Menominee Indian Tribe of Wisconsin, and the U.S. Fish & Wildlife Service.



Together they administer settlement funds that are used to address natural resource injuries caused by past releases of PCBs into the Lower Fox River and Green Bay area. Funds are used to restore, rehabilitate, replace, and acquire the equivalent of the natural resources that have been injured. Over the last decade the council has funded wetland and stream restorations, land acquisition & protection, fisheries projects, and boat launches (see dots on map below).

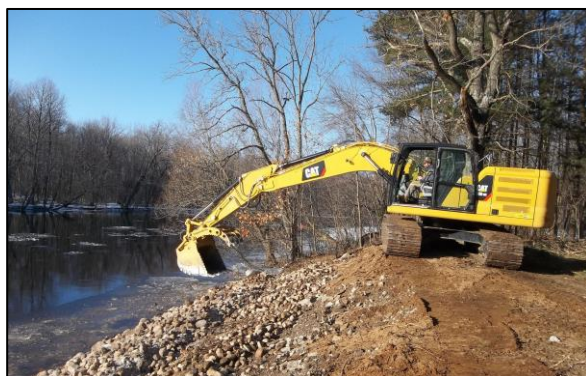


Many fish that call the Bay home, including walleye, northern pike, smallmouth bass, and Great Lakes musky spawn in the Lower Peshtigo

River. The Peshtigo has also been identified as one of the most important streams supporting the recovery of lake sturgeon in Green Bay. The deep, slow, winding river and abundant wetlands provide the ideal habitat where young lake sturgeon develop before they swim out into the open waters of Green Bay. Unfortunately, the river doesn't have a lot of clean coarse cobble (2-8-inch rock) where sturgeon prefer to deposit their eggs. The solution was to seek funding from the Trustee Council for a project that would control erosion and provide much needed habitat for spawning sturgeon (below).



The approved plan called for re-shaping the bank, adding 750 tons of limestone to resist erosion and topping it off with 580 tons of cobble-sized rock for spawning habitat. The Trustee Council provided funding for 75% of the total cost which included time, materials, and heavy equipment use. Much of the local share was provided by the Marinette County Forestry Department in the form of donated cobble stone from a county-owned gravel pit, with the landowners providing the balance of the local share.



Limestone and cobble were hauled to the site and stockpiled in the fall of 2018. In January 2019, the site was cleared and rock was placed by the County Forestry Department (below). It didn't take long for fish to find they newly improved habitat and start using it. Lake sturgeon were seen spawning at the site in May and a pair of Great Lakes spotted musky were caught in the act and recoded as they spawned along the rock! A video clip of spawning musky can be seen on the Marinette County LWCD Facebook page at: <https://www.facebook.com/Marinette-County-Land-Information-Department-1707032496207222/>.



The project was so successful that the DNR approached the county to apply for another grant to install more spawning habitat on state-owned land about a mile south of the original site. Stone

was installed at that site in January of 2020. That project stabilized more than 200 feet of eroding shoreline and included a carry-in boat launch for canoes and kayaks. The site should be ready for use by this summer.



These projects are an excellent example of state and local partnerships that take advantage of environmental grant funding to improve fish habitat. While the site on private land is not open to the public from the shoreline, anglers are welcome to fish the site from the river, and increased populations of walleye, sturgeon, and musky will benefit anglers and the local economy.



To learn more about the Fox River Trustee Council and their other projects, visit the website at <https://www.foxrivernrda.org/>.

The Fox River Trustees support the long term recovery, protection, and enhancement of the Lower Fox River and Green Bay ecosystem. The agencies and Tribes that comprise the Fox River/Green Bay Natural Resource Trustee Council are empowered by Federal law to act on behalf of the public as trustees of natural resources. Legal authorities include:

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Federal Water Pollution Control Act (CWA, commonly known as the Clean Water Act)



Contact the Coordinators for more information:

Betsy Galbraith, Trustee Council Coordinator
920.866.1753
betsy_galbraith@fws.gov

Trina Soyk, Restoration Coordinator
920.866.1737
trina_soyk@fws.gov



Build your Own Rain Garden for Runoff Control & Wildlife Habitat

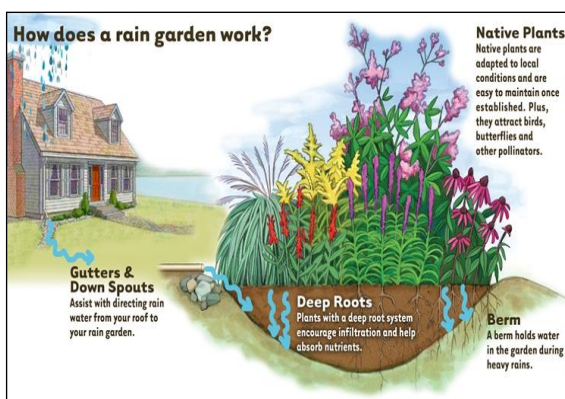
From <https://dnr.wi.gov/wnrmag/html/stories/2008/apr08/raingarden.htm>

Need a project to keep everyone busy this summer? Do you have standing water issues or drainage issues around your home after a rainfall? **Plant a rain garden!** Every time it rains, water runs off impervious surfaces such as roofs, driveways, roads and parking lots, collecting pollutants along the way. By building a rain garden at your home, you can control water issues and help reduce the amount of pollutants that leave your yard and enter nearby lakes, streams and ponds. It will make your yard look great and provide good wildlife habitat.



Draining water efficiently from homes, streets and businesses has long been relegated to the world of engineers and community planners. Roofs are pitched, landscapes graded and sidewalks sloped to quickly carry rainwater away. Home gutters, drain pipes and driveways flush and rush stormwater toward curbs and into storm sewers that pipe the water directly into streams, lakes or treatment plants. All that engineering was deemed necessary because paved surfaces prevented rain from doing what it was meant to do naturally: filter through the ground into the water table. But we're slowly appreciating that there's another way to get stormwater out of gutters and away from foundations while keeping this liquid asset near our front and backyards – rain gardens.

Rain gardens are shallow depressions with loose soil designed to collect rain from impervious surfaces such as roofs and parking lots, slow it down and give plants, bacteria and soils time to clean the water as it seeps into the ground. The concept is simple enough for anyone with some green space to put into practice. More important, according to Roger Bannerman, a DNR stormwater specialist, these gardens can be sustained like any other garden without using manmade energy. **Rain gardens can help recharge local aquifers, protect communities from flooding and slow the flow of city street pollutants like fertilizer, road salt, oils and pesticides.**



By keeping stormwater more widespread close to where it falls, rain gardens provide less opportunity for stormwater to dissolve and scour contaminated oils, metals and other chemicals from the roads and curbside. Rain gardens actually filter pollutants from the water as it percolates through the soil on its way to becoming groundwater.

Declining groundwater levels due to human use not only drop the water table but significantly affect aquatic ecosystems. During periods of little rain, groundwater discharge forms the main flow in streams, and this cooler water "can be critical since cold water holds more oxygen."

So, rain gardens make for better surface water quality, groundwater quality and overall hydrological health.



Homeowners, neighborhood developers and commercial businesses are all experimenting with designs to incorporate rain gardens on their properties. Since rain gardens are designed to handle average rainfalls - not big blowout storms - traditional curbs and gutters are still needed. But these gardens can provide an important buffer in both new developments and landscape renovations. Such gardens are now commonplace in new subdivisions, in parking lot renovations, at churches, schools, strip malls, gas stations and residential neighborhoods. They don't involve a lot of centralized planning. They don't require much space. They can fit into oddball shapes, and are readily added to existing buildings. Rain gardens look nice, and you don't need to be an engineer to build one. Anyone can make a rain garden – including you!



A lot of your planning can be done outside of the gardening season. First decide what you want to accomplish. Rain gardens can be placed fairly near your house (at least 10 to 20 feet from the downspout and foundation) to catch roof runoff or farther out if you want to collect water from your lawn and roof.

Sketch It Out – Draw a rough sketch of your property and house. Note the locations of property boundaries, septic fields, buried utility lines (including sewer laterals, water lines, power lines, phone lines and gas lines). Don't plan a rain garden under big tree roots that would be tough to excavate and where additional water might damage trees. Also don't be tempted to place a rain garden in places in your yard where water already ponds. Your goal is to encourage infiltration, and wet patches already indicate where soil is compacted and drainage is slow. You also don't want to place a rain garden in high traffic areas where children play or where foot traffic will only further compact or muddy up wet soils.

Gauge the Slope – Once you've picked a relatively flat area of your yard, you'll want to gauge the slope, test the soil type and determine the plot size. Typically rain gardens only need to be about four to eight inches deep. You can determine the slope with a few wooden stakes, a piece of string and a carpenter's level, a simple line level or a laser level, all of which are available at hardware stores. Measuring slope is a simple calculation. Stretch the string horizontally between stakes placed about 15 feet apart. Check that the string is level. Measure the distance (width) in inches between the two stakes, then measure the height on the downhill stake between the string and the ground. Divide the height by the width and multiply by 100 to find

the percent slope in that part of your lawn. If the slope is less than four percent, plan on a rain garden about three to five inches deep. If the slope is between five and seven percent, figure you will need a rain garden that is a bit deeper, say six to seven inches. If the slope is between eight and 12 percent, you will need a rain garden about eight inches deep. For greater than 12 percent slope, consider working with a professional landscaper because you'll have to dig a bit deeper and will likely need some equipment.

Soil Types and Estimate Garden Size – Sandy and silty (also called loam) soils drain much faster than clayey soils. The size of the rain garden will have to be larger if it is draining clayey soils that allow water to seep in more slowly. Once you have an idea of the soil types and drainage pattern, you can decide to either work with what you've got or increase your soil's permeability. "Mixing compost or mulch into your soil really increases infiltration later," Bannerman says. "Incorporating dead leaves or dried grass clippings boosts permeability as well."



A rain garden in sandy soils needs to be about 20 percent of the size of the drainage area, 30 percent for silty or loamy soils and 60 percent in clay soils. Typical rain gardens for residential homes range from 150 to 400 square feet and are wider than they are long. Give your rain garden an outlet, too. Just like an overflowing tub, there are times when it may overflow the berm. Rain gardens are meant to handle average storms and you don't want to drown or wash out your plants when a big rain comes along. When it overflows, you want to give the water a path to follow the natural drainage pattern and keep flowing away from your house or lot.



Plant Selection – In most rain gardens plants are alternately deluged then left high and dry. Some of the best vegetation for rain gardens in the Upper Midwest comes from the native prairies that adapted to these same conditions. Prairie flowers have deep roots that may go down ten feet. When the weather is dry, they can access sources of water unavailable to other vegetation, and when it's wet, their root structures provide deep conduits where rain can flow. If a prairie garden isn't what you envisioned, there are more traditional trees, shrubs and flowers that "don't mind getting their feet wet".

Continued next page



Early Season Vegetable Insect Pests

By Scott Reuss, Marinette County UW-Extension Agriculture/Horticulture Agent

Weather patterns have been inconsistent so far this growing season, causing a wide level of variation in vegetable garden growth. However, one aspect that is probably consistent across all gardens is that early season insect pests are present and starting to munch their way through our gardens. Some are worse than others, in regards to the level of damage they will do to plants, but all of them merit monitoring and management.



The first step in properly making management decisions is identification. If you don't know what you're facing, you will have much more difficulty effectively managing the critters or knowing if it is worth your effort to do so. Let's review the key insect pests that you may be seeing and the vegetables on which you may find them, or their damage. The links at paragraph ends take you to factsheets that offer much more information about the specific pests.

The most general insect at this time of the year is the **black cutworm**. It is also probably the most frustrating, as it can simply make plants disappear overnight. The caterpillars are fairly robust, dark gray with a few darker spots, and are generally only active at night, so they are very difficult to find. Their name describes what they do – they physically chew through and cut off young plants and either eat the entire thing right there, leave the cut off portion laying on the soil surface, or dig into the soil and pull the plant with it. As mentioned, they do this at night and during the day they are hidden in the soil, usually somewhat close (within 1 foot or so) to the last plant on which they fed.

- <https://vegento.russell.wisc.edu/pests/black-cutworm/>
- <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3821.pdf>



Predicting cutworm damage is difficult, as they feed on both seedlings and transplants of almost all vegetables. Transplant damage is more economically important, but may be a bit simpler to stop. Placing a physical barrier around the plant stem is the simplest way to accomplish that goal. You can use barriers that wrap directly on

the stem, but they are a bit trickier to apply and need to either expand, degrade, or be removed as the plant grows. Larger diameter barriers such as cans, PVC pipe pieces, sturdier plastic bottles/jugs, or other suitable materials do very well, and many gardeners save bags full of them to place around each tomato, pepper, cabbage, cauliflower, eggplant, or any other transplant which they put into the garden. If you see damage in seeded rows, do some digging in the top inch of soil around the area of newest damage and you can hopefully find and kill the caterpillar before they continue their way down the row.

Most other insects are more particular about which plants they want to eat. The next most general insect is the **corn seed maggot**. And, of course, its preferred food is not corn, but beans. The adult fly lays their eggs in freshly worked soil and the maggots feed on imbibing seeds and developing seedlings. They really like lima beans, wax beans, green beans, cucumbers and melons, squashes, and, of course, corn and a few others. Effective management methods are few, but planting multiple times to ensure missing the primary flight is one possibility. Another is to put a layer of clean wood ash over the row after planting. This changes the texture enough that they are less likely to lay their eggs there.

<https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3820.pdf>



For the cabbage family, the imported **cabbageworm** (below) is the most serious pest and this day-flying white butterfly is already out and about. They lay their eggs on all vegetables in this family, but are most damaging on cabbages, as they can chew into the head and create opportunities for fungal pathogens to cause further damage. Catching and killing the adult butterflies is an option, as well as physically controlling the caterpillars on the plants. Insecticides are also available, including Bt products and others, most commonly including the active ingredient carbaryl.

<https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3724-E.pdf>



Another cabbage family critter is the **cabbage maggot**, very similar to the corn seed maggot already discussed. Their maggots feed on roots, though, and create very poor quality, often inedible, radishes, turnips, and rutabagas.

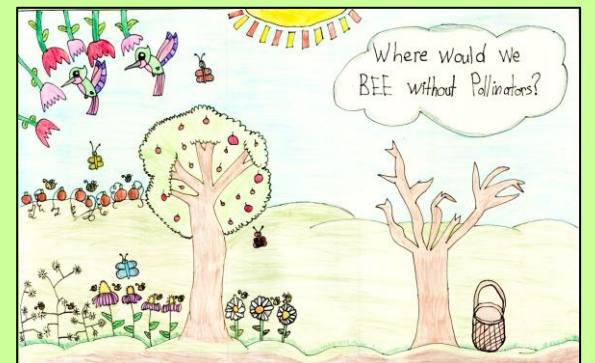
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2020 National Association of Conservation Districts (NACD) Environmental Poster Contest - "Where Would We BEE without Pollinators?"



This annual environmental poster contest is held in cooperation with the Wisconsin Land & Water Conservation Association (WLWCA) and in conjunction with area and state contests. The poster contest has five divisions. Cash prizes are awarded to the first three places and honorable mention in each division. All participants receive a certificate.



Two posters from Marinette County placed second in the State Environmental Awareness Poster Contest. The contest was held at the Wisconsin Land + Water Conservation Association Annual Conference in Green Bay in March. Congratulations to Cora Parchim (above - Second Place Elementary Division) and Emily Peters (below - Second Place Junior Division)!



Pollinators form the foundations of a healthy and sustainable future for food and the environment, but in recent years, they have shown concerning signs of decline. It's important that we work to help them prosper by enhancing native pollinator habitats and protecting against pollinator declines.

To see the other poster entries, please go to: [https://www.marinettecounty.com/i_marinette/d/Land Information/small winners for web 2020.pdf](https://www.marinettecounty.com/i_marinette/d/Land%20Information/small%20winners%20for%20web%202020.pdf)

Before we ever put a pencil in a child's hands, those hands should dig, climb, press, pull, squish, twist, and pinch in a wide array of environments and with a variety of materials.

Amanda Morgan



Conserving the Jewels of the Night:
Firefly-Friendly Lighting Practices

https://xerces.org/sites/default/files/publications/19-055_Firefly_Friendly_Lighting_FS_web.pdf



Views like this are becoming increasingly rare as artificial light at night diminishes natural darkness, competing with fireflies that use bioluminescence to communicate. However, there are many ways to make your lighting less disruptive to nearby fireflies.

How Are Lights Harmful to Fireflies?

Artificial light at night, ALAN for short, may be one of the main drivers of firefly declines. At least 80% of the firefly species found in the United States and Canada communicate with each other using bioluminescent light signals in the form of flashes, flickers, or glows. These species are active at dusk or after dark, and artificial lights that are on at this time can make it harder for them to see each other. It may also make fire-flies more vulnerable to predators that would otherwise be repelled by their light. The resulting decreases in repro-duction and survival could have severe consequences for firefly populations.



Where Does ALAN Come From?

ALAN can be caused by street and house lights, vehicle headlights, billboards, and even gas flares from oil fields. It is usually classified into three types, all of which can affect firefly populations: 1. Skyglow: this glowing haze over urban areas makes it hard to see the stars.2. Light trespass: this occurs when light at ground level spreads beyond its intended or needed area.3. Glare: this is any light that excessively illuminates areas or objects and can have a blinding effect. Unfortunately for fireflies (and many other nocturnal and crepuscular animals), the night sky is brightening rap-idly all over the world. The United States and Canada have reached the point where only a handful of areas are truly dark at night. In fact, 80% of people in North America can no longer see the Milky Way under even the clearest conditions, because it is obscured by skyglow.

How Can I Make My Lights Firefly Friendly?

There are many ways to make your lighting less disruptive to nearby fireflies. The best method is to turn out lights you aren't using. For example:

- Remove lights that only serve a cosmetic purpose, such as tree lights and facade lighting.

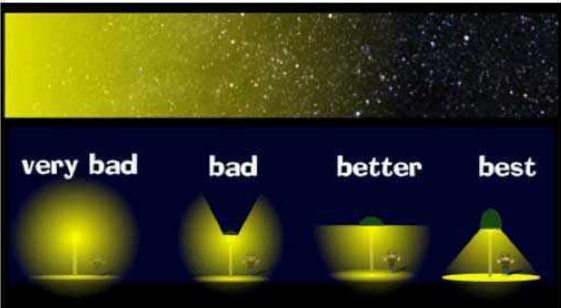
- Turn off as many other outdoor lights as you can - darkness is best for fireflies.
- Install motion activators that turn off lights when no one is around.
- Install timers that turn off lights when you are not likely to be around (such as after you normally go to bed) and when fireflies are active, which is dusk through dawn in summer months.



Glare from poorly designed and overly bright unshielded streetlights

If you need to have lights on, consider these ways of minimizing their impact:

- Dim your lights to the lowest acceptable intensity with dimmer switches or filters.
- Filter lights with red gel filters to minimize visibility to fireflies and other insects. These filters are often available at major general retailers or specialty lighting or camera stores.
- Install shielding around lights to keep light from escaping up into the sky (which worsens light pollution) and direct light away from grass, shrubs, or trees and toward intended areas like walkways.



- Close your curtains at night, so that light you are using indoors doesn't spill outside.
- Shade trees can do a lot to mitigate light pollution. They also hold moisture that fireflies and their prey need to survive, and support other wildlife.

For more information about fireflies, visit:

- <http://www.myminnisotawoods.umn.edu/2018/05/fireflies-natures-night-lights/>
- <https://theconversation.com/how-fireflies-glow-and-what-signals-theyre-sending-118574>

To learn more about artificial light at night, visit the *International Dark-Sky Association* (IDA) at www.darksky.org.



Activity for Kids - Go on a
Micro-Hike!



In this activity, children focus on a small area outside and observe natural goings-on up close! Materials needed are simply lengths of string or yarn, and if available, a magnifying glass.

Give each child a five-foot string or piece of yarn. Ask each child to lay the length of the string on the most interesting ground they can find outside. Tell the group to pretend that they have shrunk to the size of an ant, beetle, or other small creature.

Give each child a magnifying glass. Invite children to explore the ground along their string, using the magnifying glasses. Ask them to keep their eyes not higher than one foot above the ground. If the ground isn't wet, encourage them to lie on their bellies while exploring.



After the micro-hike, invite the children to share their observations:

- 🔍 What did you see on your journey as a tiny creature?
- 🔍 Did you see things that you don't normally see? Why or why not?
- 🔍 Did you know you were in a habitat?
- 🔍 What do small creatures need to live in their habitat? Did you see any of those things?
- 🔍 What is the habitat for humans?
- 🔍 What do humans need to live?
- 🔍 Would you like to be an ant or small creature for a day? For a week? For a year? Why or why not?

Northwoods Journal
Volume 18, Issue 1

The *Northwoods Journal* focuses on various outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

Published in cooperation by:

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Please send comments to:
Marinette County LWCD
1926 Hall Ave, Marinette, WI 54143
abartels@marinettecounty.com



Compost, continued

when squeezed indicates that the moisture content is just about right.

5. **Cover:** Lay tarps, plastic sheeting, or wood over an open pile to retain heat and moisture.
6. **Aerate:** Turn the compost every 1 to 3 weeks with a pitchfork or spin if you have a tumbler. This is also a good time to add more water if necessary to ensure that all parts of the pile stay damp.
7. **Neutralize odors:** Add lime or calcium if necessary to deter flies and neutralize odors. If the compost develops an ammonia-like smell, add more carbon-rich materials such as dried leaves or straw.
8. **Monitor temperature:** The internal temperature of the pile can be monitored with a [compost thermometer](#).

HOW TO USE FINISHED COMPOST

For new beds or borders: Amend the soil prior to planting. Add a layer of compost 1 to 3 inches thick on top of the existing soil and mix it in to a depth of 6 to 12 inches.

For established beds: Add a fresh layer of compost 1 to 2 inches thick on top of the soil in fall after plants die back, or in early spring before plants break dormancy. In addition to feeding plants, the compost layer suppresses weeds and retains moisture.

For vegetable plots including raised beds: Dig or till in 1 to 2 inches of new compost at the start of the growing season.

Article from:
https://www.gardendesign.com/how-to/composting.html?utm_source=article-newsletter&utm_medium=email&utm_campaign=Compost-ICYMI-5-7-20

Pollinator Invitation Garden (P.I.G.) Project Update – garden installations underway!

Anne Bartels, Information & Education Specialist, is staying very busy by helping around 40 homeowners and organizations install small pollinator habitat gardens. The P.I.G. project helps educate the public about the importance of pollinators, provides habitat, and connects people with nature. Below are a few photos of some of the newly installed gardens in late May/early June.



Continued from page 7 – Vegetable Pests

Vine crops are not immune to insect damage. The earliest one that we can see is the **cucumber beetle**. First generation adults emerge to feed and to lay eggs in the soil. Their feeding can be serious enough to kill seedlings and their larvae can substantially decrease vigor of developing plants by feeding on roots.



Squash bugs (below) can also overwinter and cause early season damage. Both of these insects are a bit more difficult to control, but there are insecticides labelled for their control, or you can use physical control or mesh coverings if you only have a few plants. For squash bug information: <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3755-E.pdf>. For cucumber beetles: <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3751-E.pdf>.



Our earliest vegetable, asparagus, also has a pair of beetles which affect it – the **common and spotted asparagus beetles**. Adults chew holes on the edges of spears, causing misshaping and quality decreases. They lay their eggs directly on the spears, as well. The eggs are small, dark projections which look like bristles. If they hatch, the larvae crawl up the stalk and feed inside the developing seed pods. After harvest is complete, insecticide options are valid, but physical control works best until harvest is over. Squish the adults and scrape off the eggs for simplest effect. <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3760-E.pdf>.

Although there are other insects you may find, the last ones we'll discuss are underground generalists – **grubs and wireworms**. Usually, these are only serious on garden edges that border lawns or grassy areas or in newer garden sites. These immature beetles feed on roots and can cause seedling death or plant stunting, if found in sufficient numbers. There are not any highly effective control methods in the home garden, unless you happen to have a pet skunk. For information about wireworms: <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3758-E.pdf> (image below). For beetle grubs: https://pddc.wisc.edu/wp-content/blogs.dir/39/files/Fact_Sheets/FC_PDF/MayJune_Beetles.pdf.



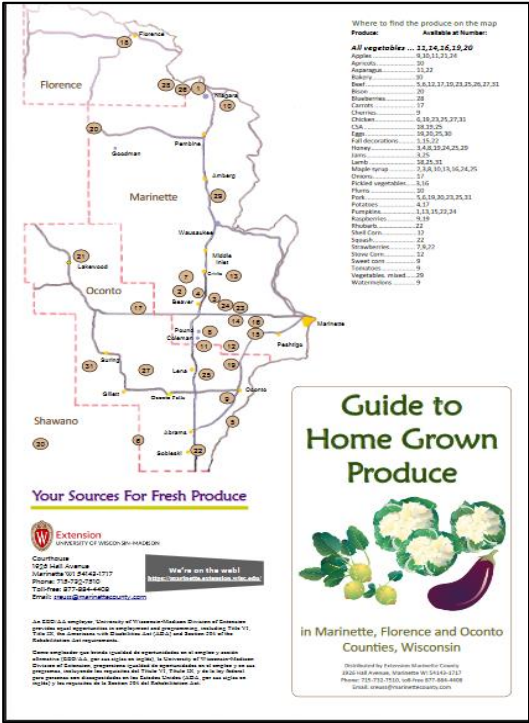
There are many ways to find out more information about these, and other, insects. One web site which has very detailed information is the Pests page of the UW-Madison Vegetable Crop Entomology group, at <https://vegento.russell.wisc.edu/pests/>. This web site is oriented toward commercial vegetable growers for control methods, but has a very thorough listing of vegetable affecting insects. Homeowner-oriented information for most garden affecting insects can be found on two different Extension websites - the main Extension publications site under the lawn & garden section, at <https://learningstore.extension.wisc.edu/> or on the vegetables section of <https://hort.extension.wisc.edu/links/>.

Contact Scott Reuss, UW-Madison Division of Extension Marinette County Agriculture & Horticulture Agent, with any questions that you may have about horticulture or agriculture topics. He can help you accurately identify the pest your plants are facing and help you consider management options. He can be reached by e-mail at scott.reuss@wisc.edu or via telephone at 715-732-7510.



Looking for Fresh Produce, or other Farm-direct Food products?

A number of farms in the Marinette County area produce and sell food products directly to consumers. The Marinette office of UW-Madison, Division of Extension, has developed a resource to help you take advantage of the enhanced flavor and nutritional status that fresh, locally-produced foods can offer. *The Guide to Home Grown Produce* lists farms found in Marinette, Florence, and Oconto Counties that sell food products directly from the farm. You can view the listing at <https://marinette.extension.wisc.edu/files/2020/05/Produce-Growers-Guide-2020-May-update.pdf>. Farms are indexed by the products which they offer, as well as having a map which can help you find farms closer to your location.



If you know of a farm whom you think should also be listed, remind them that this resource is available for them to utilize, free of charge. They can get information to Agriculture Agent, Scott Reuss, at reuss@marinettecounty.com or call 715-732-7510. You can also contact Reuss with any agricultural or horticultural questions you may have.

